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The mortality of our public men

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#### THE MORTALITY OF OUR PUBLIC MEN.

Being a Study of the Mortality of the Presidents, Vice Presidents, Senators and Representatives, of the United States Compared, with Insured Lives, and Others.\*

By Irving Fisher, Professor of Political Economy, Yale University. Chairman of the Hygiene Reference Board of the Life Extension Institute.

This paper is primarily a study of the mortality of the Senators and Representatives of the United States. As preliminary to this study, however, we first record the facts as to the longevity of the Presidents and Vice Presidents of the United States. The number of cases in the last two groups is too few, of course, to enable us to make any safe statistical generalizations. The following table gives the facts individually as to our Presidents:

LONGEVITY OF PRESIDENTS.

(1) Name.	Date of First Inaug.	(3) Years Served.	(4) Age of President when Inaug. (to Nearest Year).	Actual Years Lived from Inaug. to Death (to Nearest Year)	of Life at Inaug. (Amer.Exper.	(7) Ratio of Actual to Expectation. (5) ÷ (6) Per Cent.
Washington J. Adams Jefferson Madison Jefferson Madison J. Q. Adams Jackson J. Q. Adams Jackson Tyle Polit Polit Polit Polit Polit Polit Grant Johnson Grant Grant McMiney Roare Roarevet Roarev	Apr. 1789 Mar. 1801 Mar. 1801 Mar. 1801 Mar. 1807 Mar. 1817 Mar. 1825 Mar. 1829 Mar. 1837 Mar. 1841 Apr. 1841 Apr. 1845 Mar. 1849 July 1850 Mar. 1849 Apr. 1865 Mar. 1861 Mar. 1845 Mar. 1847 Mar. 1841 Mar. 1845 Mar. 1857 Mar. 1897 Mar. 1817 Mar. 1818 Mar. 1857 Mar. 1897 Mar. 1999	7 5/6 4 8 8 8 8 4 1/12 3 11/12 4 1/2 2 2/3 4 4 1/12 3 11/12 3 11/12 8 4 1/2 7 1/2 4 1/2 7 1/2	57 61 58 58 58 59 68 68 68 64 51 49 49 48 66 52 56 54 54 58 64 51 54 64 51 54 65 55 56 56 56 57 57 58 58 58 58 58 58 58 58 58 58 58 58 58	111 299 25 27 27 27 27 28 27 29 25 27 21 4 22 21 4 16 16 11 6 11 6 11 6 11 6	16 13 15 15 15 15 15 15 13 18 9 20 22 12 20 22 11 19 17 18 18 18 18 18 18 18 18 18 18 18 18 18	0 223 167 180 183 153 123 123 105 18 8 120 73 100 100 22 54 25 105 105 77 22 22

(a) The "American Experience table of mortality" was first published in 1868. It was constructed by Shepparl Homana, principally from the experience of the Mutual Life Insurance Co. of New York. It has been, for a long time, the common standard for life insurance companies' calculations and for statistical comparisons, although it represents a heavier mortality than that of present insurance experience.

<sup>\*</sup> Paper presented at the annual meeting of the American Statistical Association, Washington, D. C., December 29, 1915.

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The longevity of each President is reckoned from the date of inauguration—that is, from the time of his first being President. Thus Washington became President at 57 years of age when the "expectation" of life, according to the American Experience table, was 16 years. He actually lived, however, only 11 years instead of the 16. That is, he lived only 11/16, or 69 per cent., of his expectation. John Adams, on the other hand, lived after inauguration 29 years, which was 2.23 times his expectation of 13 years.

GREATEST LONGEVITY.	LEAST LONGEVITY.
John Adams (223)	Harrison (the first) (1)
Madison (180)	Garfield (2)
Jefferson (167)	Taylor (8)
J. Q. Adams (153)	Polk (18)
Van Buren (139)	Lincoln (21)
Jackson (123)	McKinley (22)
Fillmore (120)	Arthur (25)

The long-lived Presidents all belonged to the first half of the list and the majority of the short-lived ones belonged to the second half. These include the three assassinated Presidents, Lincoln, Garfield, and McKinley. If we group these deceased Presidents under four successive periods, approximately equal, we have the following table in which the Vice Presidents are also included:

RATIO (PER CENT.) OF ACTUAL TO EXPECTED LONGEVITY BEYOND INAUGURATION.

Of all E	among Preside	esinated Presidents ents; and Omitting nts Who Became ng Vice Presidents.			
Periods.	Periods. Presidents. Vice Presidents		Presidents.	Vice Presidents.	
1st period (4 Pres.—5 V. P.) 2d period (8 Pres.—7 V. P.) 3d period (7 Pres.—7 V. P.) 4th period (5 Pres.—5 V. P.)	156 84 75 45	137 94 67 42	156 84 84 84 68	100 76 69 44	
Total	82	84	98	70	

The table shows that the longevity of our Presidents, omitting the three still living, is only 82 per cent. of that

"expected" according to the table, which, in turn, is less than that among insured lives of the present time. Even if we omit the assassinated Presidents, Lincoln, Garfield, and McKinley, the longevity of the remainder is still only 93 per cent, of that expected by the American Experience table and less than two thirds the expectation of the insured lives of today. We note also that the longevity of our Presidents seems to be diminishing with the increasing complexity of modern life in Washington. Their average longevity in the four successive periods was 156, 84, 75, and 45 per cent. respectively, or, omitting the assassinated Presidents, 156, 84, 84, and 68 per cent. We find the same apparent tendency among the Vice Presidents. It is also interesting to note that the Vice Presidents seem to live out a smaller fraction of their expectations than the Presidents, excluding the influence of assassinations. This fact (if it be a significant fact rather than an accidental incident in so small a number of lives) would suggest that the official social and convivial life at Washington is a greater life-shortener than the heavy responsibilities of office.

The five Presidents of Yale University, for substantially the same period as that of the above table, show a longevity equal to 137 per cent. of their expectations. The consistent conformity of all the results to the hypothesis that a "simple" life is a long life and that a "complex" life is a short one is at least striking.

But as already emphasized, the number of lives in all three lists (only 50 in all excluding duplications) is so small that any statistical conclusions whatever, without confirmatory evidence, would be dangerous.

We turn now from these preliminary remarks on Presidential and Vice Presidential lives to the lives of our Congressmen—Senators and Representatives. Here, fortunately, we have enough lives, about 7,500, to make the results of undoubted significance.

In this study I have been fortunate in having the assistance of the New York Life Insurance Company to which I am indebted for its courtesy in permitting the clerical work to be done in its offices. I am also greatly indebted to Mr. Arthur

Hunter, its Actuary, for his assistance and criticism at every stage of the work.

The method employed has not been that of expected longevity used above, but that of expected mortality. This makes it possible to include the influence of the several thousand lives of the Congressmen still living. The mortality of the American Experience table was used here also as a standard of comparison, or measuring rod. Although, as already stated, this early table does not agree with the mortality experienced at present, either by the insurance companies of today\* or among the general public, it still serves as a convenient basis in terms of which any actual mortality may be expressed in percentages.†

The chief data for this investigation were obtained from the Biographical Congressional Directory, and the necessary facts relating to nearly 7,500 Congressmen were entered upon individual cards. As the Congressional year dates from March 4, it was found convenient to carry the observations up to March 3, 1912, at which point they were closed.‡

In order to discover the effect of Congressional life on mortality, the following table was constructed:

\* Modern experience averages about 25 per cent. less than the American Experience table. The contrast is more marked for the earlier than for the older ages.

trast is more married for the earlier tains to tue to usus again.

Thus if (for a particular year of ago) the actual death rate is half the death rate expected (for that particular year of ago) according to the American Experience table, and if the anne were true for each otherward of ago, and a constant of the superior of the same work of the same work to the part of age, we would say that the adult mortality is half of the expected. Usually, of course, the ratio of actual to expected death rate will be somewhat different for different parties, only weighted, is streat. To take a special example, we find that our of 380 Congresses (estering), the excited number who died in the second year after estering; was 7 and the number expected death of 1390 was, according to the American Experience taken after estering; was 7 and the number expected death of this second year) was 7 + 0.94 = 1.64, or 141 per cent. In this same way, the number expected death of this second year) was 7 + 0.94 = 1.64, or 141 per cent.

In this same way, the number restrict of scattal to expected of such as the expected deaths are taken, not only for the second and tenth year. In this same way, the author peed deaths are taken, not only for the second and tenth year. In this same way the actual and expected deaths are taken, not only for the second and tenth year. In this same way the actual and expected of 2.75, which deet all colours taken to the properties of the expected of 1.75, prices 190 + 170 - 11.0, or 119 per cent,, as the natio of actual to describe the death of the expected of the expected of the tenth of the contribution of the contribu

group of Congressmen in the entire category considered.

‡ Except for the cases mentioned below where the record was not complete, the investigation covered the entire history from date of entering Congress until death, or until March 3, 1912. The date of hirth was required in order to determine the age on first entering Congress. For some Congressmen this information was not given in the Directory. The number of such cases was small (785) and sufficient securacy was obtained by assuming that they entered at an average age. In other cases the Directory did not trace the history of the Congressman after his retriement from Congress. These cases were not large in number and were included in the investigation from the date of first entering Congress to the date of last retirement from Congress.

SHOWING THE MORTALITY SOON AFTER ENTERING CONCERSS AND LATER, DIVIDED IN ALL INTO FIVE PERIODS OF LIFE, NAMELY, A PERIOD OF TWO YEARS COVERING THE (FIRST) CONGRESSIONAL TERM, A PERIOD OF EIGHT YEARS, THE SECOND DECADE AFTER ENTERING; THE THIRD DECADE; AND THE FEMAINDER OF LIFE.
(All Coursesses, ediling March 2, 1911.)

Number of Years Elapsed Since First Entering Congress.	Actual Deaths.	Expected Deaths.	Ratio of Actual to Expected Deaths. Per Cent.
1- 2.	114	194.78	59
3-10.	824	833.76	99
11-20.	1,329	1,247.84	107
21-30.	1,360	1,344.67	101
21-30.	1,506	2,028.62	74

The above table shows strikingly that Congressmen had a low mortality immediately after entering Congress, but a greatly increased mortality as the years passed by, reaching the maximum in the second decade after entering Congress, after which there was a decrease. In the first period, of two years, the mortality is only a little over half of the expected by the American Experience table and somewhat less than the expected if more modern tables had been used. After two years (or one Congressional term) it almost reaches and during substantially the next three decades exceeds, the expected, and after that time it falls back to three fourths of the expected.

These figures of themselves give no proof, of course, of what causes are at work. They, however, fit into the following hypotheses: (1) Congressmen are a select group having unusual vitality, and therefore a low mortality at the outset: (2) Congressional life with its responsibilities, heckling, excitements, worries, indoor and sedentary life, late hours, dining, wining, and other unhygienic conditions makes a severe drain on this vitality, showing itself in a gradually increasing mortality; and (3) some Congressmen contrive to avoid or to correct these unhygienic conditions and cause a partial return toward the original low mortality, after their less careful colleagues have died. At any rate the cardinal fact is clear that some cause or causes connected with entering Congress tends to kill Congressmen. They enter with more than the average vitality and after a single term of office possess less than the average vitality.

The same conclusion, namely that Congressional life sets, for some cause, a killing pace, is drawn from the following table:

MORTALITY OF CONGRESSMEN ACCORDING TO LENGTH OF SERVICE, NAMELY: (A) 6 YEARS OR LESS, (B) MORE THAN 6 YEARS IN PUBLIC SERVICE. (a)

(15 Congresses, ending March 3, 1911.)

		Age on Retiremen	t from Congress.	
Length of Service.	All ages.	Under 50.	50-59.	60 and over.
6 years and under Over 6 years	97 120	112 103	€>: 103 124	74 124

(a) This investigation is confined to the group of 15 Congresses ending in 1911. Public Service includes not only service in Congress, but also any subsequent service as President or Vice President, of the United States, Cabinet Officer, Governor of a State or Ambassador to a foreign country, and similar positions under the Southern Confederacy. For this study Congressmen were entered in the investigation after the number of years in Public Service pertaining to each had been completed. Thus the mortality comparisons for a man who entered Congress in 1880 and had twenty five years of Public Service ending 1905, began with 1905 and not with 1880.

The above table shows that, in general, those who have been in Public Service the longer time have a mortality of 120 per cent. as compared with 97 per cent. for those who have served the shorter time. This contrast is the more marked the older the men when retiring from Congress. Among those retiring at sixty years of age or older the ones who keep in Public Service the longer show a mortality of 124 per cent. as contrasted with 74 per cent. for those who have served the shorter time. Thus the killing pace of public life is more killing to the older men than to the younger.\*

The following table (by years elapsed since retirement instead of by ages of Congressmen) was made to throw further light on the subject. It is confined to the last fourth of our Congresses.

\*In fact, as the first column shows, for those retiring before the age of 50 the long service men show a slightly lower mortality than the short service men. This may be the effect of selection. It is probable that in general only the hardier men either can or will choose a long career of Public Service. Everyone knows that the strain of professional life often forces men to retire; some of these men undoubtedly have died soon afterwards. The existence of this selective influence emphasizes all the more the main conclusion that the longer the public service the greater the mortality. Moreover, somewhat apart from voluntary withdrawal from an extended public career on the part of those who find they cannot keep the pace, the contrast between the mortalities of the two groups would be still greater if there were any way of transferring from the shorter service group to the longer service group, those who died before the 6 years were up, but who, had they lived, would have been classified in the long term group.

41] FIFTEEN CONGRESSES ENDING MARCH 3, 1911, OBSERVED FROM DATE OF LAST RETIREMENT FROM CONGRESS. Datis (non cont ) of Astual to Fr

	Number of Year	from Retirement.
Length of Public Service.	1-10.	Over 10
years and under	105 128	89 104

The above table shows the same contrast—higher mortality for the men who served over 6 years as compared with those who served less, i. e., 128 per cent., as contrasted with 105 per cent., and also 104 per cent., as contrasted with 89 per cent. Incidentally, the table also shows that the adverse influence of public life is, as might be expected, felt mostly soon after retirement.

In the first decade after retirement the mortality is much higher than in the next decade as a comparison of the two columns shows. This may be due largely to the fact that many retire on account of ill health, while others may lose health as a consequence of defeat. Again, as already observed, those who survive the first 10 years after retirement are presumably those who have been able to avoid, or counteract the worries and bad hygiene which have killed off their colleagues.\*

Thus far we have considered Congressmen as a single group. But the same conclusions apply separately to different periods in our national history, as the following table shows:

RATIO (PER CENT.) OF ACTUAL TO EXPECTED DEATHS.

Number of Vocas Florend Since	G	All Combined.			
Number of Years Elapsed Since First Entering Congress.	1821.	1851.	1881.	1911.	Combined
1-10	94 119 115 85	112 116 110 85	82 97 92 59	85 102 86	91 107 101 74

<sup>\*</sup>The reason why the first table giving the mortality according to time elapsing since entering Congress shows a decided fall in mortality only after the 30 year mark, while this table shows a decided fall after the 10 year mark is clear, vis.: in the last table the years are reckoned from a later date than the first, i. e., from time of retirement instead of from time of entrance. In the former table those in the second and even the third decade after entering Congress, include many who had not yet retired.

The first group consists of the Continental Congresses and the first 1ö regular Congresses ending with March 3, 1821, and the other three groups, each of 15 Congresses, ending respectively March 3, 1851, 1881, and 1911. The individual cases were classified in the four groups according to the date of first entering Congress. It will be observed by following the eye down any one of the columns of the table that the mortality always rises from the first to the second decade after entering Congress and falls thereafter, especially from the third to the fourth decades.

The above table also affords an opportunity to compare one historical period with another, if the eve is run through it horizontally instead of vertically. The most striking results of such comparisons are the lower mortality of the last two groups of Congresses as compared with the first two. The low mortality of the third group seems especially remarkable.

For historical comparison, however, the best data are those in which the mortality is presented by the attained ages of the Congressmen as in the following table, which for the present purpose should be read vertically:

RATIO (PER CENT.) OF ACTUAL TO EXPECTED DEATHS BY ATTAINED AGES.

Congresses.	All Ages.	Under 40.	40-49.	50-59.	30 and over.
Continental Congresses and 16 regular Congresses ending March 3, 1821	100	82	121	143	91
	100	114	133	135	91
	79	110	103	97	74
	92	89	85	98	91

In this table we note: (1) that, in general, there has been an improvement in mortality from the earliest period of our history to modern times, the first two groups showing 100 per cent, each and the last two, 79 and 92 respectively; (2) that for the oldest age group-those dying over 60 years of age-there has been, generally speaking, no improvement, the figures being 91, 91, 74, and 91 per cent.; (3) that the Congresses of the third period of our history had an exceptionally low mortality, especially for the older ages.

It seems difficult to account for the exceptionally low mortality in the group of Congresses from 1851 to 1881. Probably there are several reasons, such as: (1) the temporary withdrawal (about 1861-1867) of the Southern contingent of Congressmen because of the Civil War (the insurance companies have experienced a higher mortality in the South than in other sections of the country and the statistics given below show the same contrast for Congressmen); (2) the stricter standard of living which prevailed during war time; (3) the inclusion in Congress of a larger proportion of men of "plain living and high thinking" during the period of and following the Civil War. The last named factor may account for the special superiority of the Congresses of the third period in respect to the older ages at which time the "wear and tear" diseases chiefly enter into mortality.

As has been previously stated, the expected deaths in the tables of this paper have been calculated by the American Experience table, which table shows a much higher death rate than is experienced by American insured persons at the present time. For instance, the present ratio of actual to expected deaths among the insurance companies of this country is about 75 per cent. of the American Experience table. Policyholders, however, have passed a medical examination, which is not the case with Congressmen. It is necessary, therefore, to turn to some other records in order to determine approximately what relationship to the American Experience table the mortality among Congressmen should have. In the Transactions of the Actuarial Society, Vol. X, there appears an analysis by Mr. E. B. Morris of the mortality experienced among Yale graduates.\*

In order that a more detailed comparison with the mortality experience of Yale graduates may be made, the following tables have been prepared.

They show the mortality of Congressmen and the mortality of Yale graduates as compared with the American Experience table.

<sup>\*</sup> The figures of Mr. Morris are, so far as I know, the only figures for any representative class of the population extending continuously from the eighteenth century through the nineteenth.

#### RATIO (PER CENT.) OF ACTUAL TO EXPECTED DEATHS.

		1	Attained Age	13.	
Groups.	All Ages.	Under 40.	40-49.	50-59.	60 and Over.
31 Congresses ending March 3, 1851 Yale Graduates 1792 to 1849 of the Academic	100	98	128	139	91
Yale Graduates 1792 to 1849 of the Academic Department	86	125	115	92	75

#### RATIO (PER CENT.) OF ACTUAL TO EXPECTED DEATHS.

	Attained Ages.						
Groups.	All Ages.	Under 40.	40-49.	50-59.	60 and Over.		
30 Congresses ending March 3, 1911 Yale Graduates 1850 to 1900 of the Academic Dept., Graduates 1852 to 1901 of	82	101	96	98	77		
Sheffield Scientific School, and Graduates 1843 to 1901 of Law School	76	70	81	79	85		

The lower mortality of the Yale graduates is clearly brought out in the foregoing comparison.\*

As to historical trends we may note such for the mortality of Yale graduates by taking the historical groups worked out by Mr. Morris. These extend back of our national history. The chief groups are three, covering substantially the eighteenth century and the two halves of the nine-teenth in the following divisions: (1) the graduates 1701-1791; (2) the graduates of the Academic Department 1792-1849; (3) the graduates of the Academic Department 1850-1900; the graduates of the Sheffield Scientific School 1852-1901; and the graduates of the Law School 1843-1901.

The ratios of actual to expected deaths (according to the American Experience table) for these three groups were: 94, 86, and 76 per cent., respectively. It is evident from these figures that there has been a continuous improvement in mortality, as was the case among Congressmen. We also

note for Yale graduates that there is an improvement as between the two periods for all ages except "60 and over" for which, on the contrary, there has been an increase of mortality, namely from 75 to 85 per cent.\*

The recent cessation of improvement in middle age mortality and in some cases even the increase of mortality after middle age is a fact we encounter at almost every turn. It is even observable in insured lives in spite of improvements in the rigor of medical selection, especially for the older ages,† and in the classes constituting policy holders. The great medico-actuarial investigation conducted under Mr. Arthur Hunter showed that mortality at ages 60 and over "has shown no distinct improvement." For the three successive periods 1885-92, 1893-1900, 1901-08, the figures were 91, 98, 93 (based on a special table of mortality).‡ The tendency is, in fact, less observable among Congressional lives than in other quarters, owing probably to the fact that public men are today held more strictly to account for their personal conduct than formerly, when laxity of various kinds was condoned.

I close this paper by a geographic comparison of Congressmen from the Southern, Eastern, and Western sections § of the United States.

\* Morris's figures show, for the higher ages (above 55), a decided retrogression. The mortalities for ages over 45 were:

. (Dates Exact for Academic Department and Approximate for Others.)

	Ages.			
	46-55.	56-65.	66-75.	76 and Older.
1825-1849	98 60 88	74 81 211	75 86	70 93

<sup>†</sup> See Eugene L. Fisk, M.D., "Force of Adverse Selection among Entrants at the Extremes of Life,"

<sup>•</sup> The Yale graduates of the medical school have not been included in the above tables. The experience in regard to these graduates had not been subdivided in the form desired for the above comparison. Although the mortality among medical graduates was newshat higher than among the other graduates, the relative number of the medical graduates being small, their exclusion does not sensibly affect the comparison.

Proceedings Assoc. Life Ius. Med. Directors, October 24, 1907. Pp. 129-170.

See Medico-Actuarial Mortality Investigation, Vol. I, Actuarial Society, New York, 1912.

<sup>§</sup> în the Southern states were included Virginia, North Carolina, South Carolina, Georgia, Florida, Kentuck, Tennesse, Alabama, Mississippi, Arkanasa, Louisiana, Oklahoma, and Tenas. The Eastern states for this purpose were considered to be Asian. New Hampshire, Vermont, Massachuette, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Ohio, Indiana, Illinois, Michigan, Wisconsin, Delaware, Maryland, West Virginia, and the District of Columbia. The remaining states were classified as Western.

The results of this investigation based upon the group of 15 Congresses ending in 1911 are as follows:

gresses ending in 1911 are as follows:	Ratio (per cent.) of Actual to Expected Deaths.
Southern	100
Eastern	
Western	
All states	

The foregoing is in conformity with the experience of insurance companies—namely, that the Southern states have the highest mortality, and the Western states the lowest, while the Eastern states represent about the average mortality throughout the United States.

The results of this investigation may be summarized in the following statistical generalizations:

1. The mortality of Congressmen for the two years immediately after entering Congress has been low, being very much lower than that of the American Experience table and materially lower than the mortality of Yale graduates from 1792 on.

2. The mortality of Congressmen in the next eight years of life was much higher, being about equal to that of the American Experience table and above the mortality of Yale graduates. Again, their mortality in the next decade was still higher.

3. Those Congressmen surviving beyond the second decade showed, in turn, a much lower mortality.

4. Those Congressmen whose Public Service was only 6 years or less showed a materially lower mortality than those whose Public Service extended beyond 6 years.

5. The mortality of our modern Congressmen is in general lower than that of their predecessors.

 This historical improvement in Congressional mortality is greatest for the younger ages—in accordance with the observations on mortality of the general population.

7. For the ages "60 and above" there has been no improvement. This is also in accordance with observations on the mortality of the general population.

8. The Congressional mortality during and soon after the Civil War was exceptionally low.

9. This low mortality for the Civil War period was especially marked for the older ages.

10. The last five conclusions (as to historical changes in mortality) are, in general, consonant with the results of the investigations of Mr. E. B. Morris for Yale graduates. (In the case of Yale graduates the mortality at older ages has not only not improved but has grown worse.)

11. Comparing the mortality of Southern, Eastern, and Western Congressmen we find that of the Southerners was the highest and that of the Westerners the lowest, the figures being 100, 93, and 80 per cent. for the South, East, and West

respectively.

In the above generalizations no mention has been made of the mortality of Presidents and Vice Presidents. This seems to be high and to show a consistent progressive change for the worse; but the number of lives available is so small, compared with the number of Congressmen considered, as scarcely to justify independent generalizations.

The foregoing generalizations merely give the facts as we find them without reference to their interpretation. The facts may seem to different people capable of different interpretations. My own interpretation is one into which all the facts fit perfectly and which is also in tune with the results of E. B. Morris's investigations for Yale graduates and other studies, such as certain investigations of the United States Census and of the Life Extension Institute. This interpretation is as follows:

(a) Presidents, Vice Presidents, and Congressmen are a select group endowed at the outset with unusual vitality.

(b) The vitality of most of them is severely taxed and materially reduced by the heavy responsibilities and bad personal hygiene incident to a public career.

(c) A minority escape the worst of these conditions and retain the major part of their natural endowment of vitality.

(d) Bad hygiene has been more destructive than the weight of responsibility. This conclusion is suggested by the fact that the Vice Presidents suffer a greater curtailment of life than the Presidents, although Vice Presidents have far less responsibility but spend much more time in Washington social life than the Presidents. It is also suggested by the fact that the Civil War period, with its greater weight of responsibility but more simple living, showed a lower mortality than the periods preceding and following, with less weight of responsi-

bility, but less simple living.

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(e) Historically there has been a progressive decrease in those causes of death consisting of infections which kill their victims chiefly at the earlier ages, but a progressive change for the worse in those causes of death consisting of the wear and tear diseases (or degenerative diseases) which kill their victims chiefly at the later years. These opposite changes in the infectious and degenerative diseases would explain the improvement in mortality at the earlier ages and, on the other hand, the non-improvement (and in the case of the Yale graduates even positive retrogression) in the mortality at the older ages; again they would explain the marked exceptionality of the older ages in the Civil War period; for if it was plain living which explained the low mortality of that period we should expect the most marked influence of this factor to appear, just as it does, at the older ages at which the wear and tear mortality is chiefly registered.

(f) The chief causes of wear and tear on the lives of Congressmen are the same as those applying to modern convivial social life in general; they are the causes emphasized by the Life Extension Institute which, through its Hygiene Reference Board of hygienists and scientists, has described these causes in its recent hand book "How to Live." The chief causes emphasized are indoor and sedentary living, a crouching, cramping posture, late dinners, overeating, especially of nitrogenous foods, such as meat and eggs, overconcentration or lack of bulk in diet, hasty eating, constipation, irregular hours, lack of sleep, worry, and the use of drugs, especially narcotics like alcohol and tobacco. In short, the chief reasons why Congressmen shorten their lives are avoidable, being due, not so much to their work as to the kind of life into which their work leads them.

The damage to vitality which we find from public life is not, therefore, put forward as an argument against entering public service; nor will a knowledge of the facts probably tend in that direction, certainly not among those who place public interests above personal interests, as every public man should. But knowledge is power and a knowledge of the facts should enable us to protect our public men or enable them to protect themselves, and to do so in the public interest. This can be accomplished by better general health conditions in the country and its Capital, by better health customs and habits, by better health ideals, and by a more systematic application of the imperfect ideals already existing.

# END OF TITLE